

# ABSTRACT OF THE DISCLOSURE

Phosphor compositions having the formulas  $(\text{Tb}_{1-x-y-z-w}\text{Y}_x\text{Gd}_y\text{Lu}_z\text{Ce}_w)_3\text{M}_r\text{Al}_{s-r}\text{O}_{12+\delta}$ , where M is selected from Sc, In, Ga, Zn, or Mg, and where  $0 < w \leq 0.3$ ,  $0 \leq x < 1$ ,  $0 \leq y \leq 0.4$ ,  $0 \leq z < 1$ ,  $0 \leq r \leq 4.5$ ,  $4.5 \leq s \leq 6$ , and  $-1.5 \leq \delta \leq 1.5$ ;  $(\text{RE}_{1-x}\text{Sc}_x\text{Ce}_y)_2\text{A}_{3-p}\text{B}_p\text{Si}_{z-q}\text{Ge}_q\text{O}_{12+\delta}$ , where RE is selected from a lanthanide ion or  $\text{Y}^{3+}$ , A is selected from Mg, Ca, Sr, or Ba, B is selected from Mg and Zn, and where  $0 \leq p \leq 3$ ,  $0 \leq q \leq 3$ ,  $2.5 \leq z \leq 3.5$ ,  $0 \leq x < 1$ ,  $0 < y \leq 0.3$ ,  $-1.5 \leq \delta \leq 1.5$ ; and  $(\text{Ca}_{1-x-y-z}\text{Sr}_x\text{Ba}_y\text{Ce}_z)_3(\text{Sc}_{1-a-b}\text{Lu}_a\text{D}_c)_2\text{Si}_{n-w}\text{Ge}_w\text{O}_{12+\delta}$ , where D is either Mg or Zn,  $0 \leq x < 1$ ,  $0 \leq y < 1$ ,  $0 < z \leq 0.3$ ,  $0 \leq a \leq 1$ ,  $0 \leq c \leq 1$ ,  $0 \leq w \leq 3$ ,  $2.5 \leq n \leq 3.5$ , and  $-1.5 \leq \delta \leq 1.5$ . Also disclosed are light emitting devices including a light source and at least one of the above phosphor compositions.